

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91 - 041

WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF VALLEJO, TRAVIS AIR FORCE BASE WATER TREATMENT PLANT,
TRAVIS AIR FORCE BASE, SOLANO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The City of Vallejo owns and operates the Travis Air Force Base Water Treatment Plant which provides drinking water for the Travis Air Force Base (AFB). The plant is located in an unincorporated area of Solano County just outside the northwest boundary of the AFB. The plant sits on top of a knoll, surrounded by open grassland, in an 8.4 acre site owned by the City of Vallejo.
2. The City of Vallejo (hereinafter called the Discharger) submitted a Report of Waste Discharge dated June 20, 1990, and additional information was submitted by the City's consultant by letter dated December 21, 1990, for issuance of waste discharge requirements for discharges related to the operation and maintenance of the water treatment plant.
3. The Discharger has proposed to upgrade the plant in order to improve its reliability and efficiency, to meet anticipated drinking water quality requirements, to increase the plants capacity, and to provide sludge handling and drying facilities. The plant upgrade includes renovation of existing facilities (filters, flocculation/sedimentation basin, operations building) and construction of new facilities (chemical storage and feed building, ozonation system, back-wash water recovery pond, and on-site sludge drying beds). The raw water intake for the plant is from the North Bay Aqueduct. The plant upgrade will increase the peak flow capacity from the current 6 million gallons per day (mgd) to 7.5 mgd.
4. Improvements to the solids handling facilities include installation of a vacuum type sludge collection system in the sedimentation basins, and new on-site sludge drying beds, to be constructed from on-site clay materials. Sludge solids will be removed from the sedimentation basins on regular daily intervals and pumped to the drying beds. The drying beds will have an underdrain system to facilitate dewatering and drying of the sludge. Decanted water from the drying beds will be returned to the fully-contained washwater recovery ponds. Dried sludge will be removed and hauled off-site to an authorized landfill, about once every three to six months.

5. Analyses of existing sedimentation basin sludge for Aluminum, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Silver, Selenium and Zinc indicate wet weight concentrations for these metals below the Total Threshold Limit Concentrations for classification of hazardous waste (Title 22 Section 66699 of the California Code of Regulations).
6. Routine maintenance of the sedimentation basins will include draining about 700,000 gallons of settled water out of the basins about twice each year. The settled water would be discharged to an existing, unlined open drainage ditch located southwest of the plant. The drainage ditch runs southward through the AFB property and, about one mile from the water plant drainage outfall, connects with Union Creek which is a tributary to the Suisun Marsh. During the wet weather season the drainage ditch captures and conveys stormwater runoff from the AFB, but otherwise the ditch does not contain flowing surface water.
7. Discharges from the sedimentation basins to the drainage ditch will consist only of the partially treated potable water contained in the basins. Sludge solids contained in the basins will not be discharged to the drainage ditch. The discharges will be controlled to prevent erosion and wash-out of the ditch, and contained within the ditch for percolation into the drainage ditch soils, with no discharge to receiving waters.
8. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin plan identifies beneficial uses for surface waters and ground water in the Suisun-Fairfield Valley area, which is the vicinity of the project.
9. The beneficial uses identified in the Basin Plan for surface waters in the Suisun-Fairfield Valley area include:
 - a. Fresh Water Replenishment
 - b. Water Contact Recreation
 - c. Non-contact Water Recreation
 - d. Warm and Cold Fresh Water Habitat
 - e. Wildlife Habitat
 - f. Fish Migration and Spawning.
10. The existing and potential beneficial uses identified in the Basin Plan for ground water in the Suisun-Fairfield Valley area include:
 - a. Municipal Supply
 - b. Industrial Process Water Supply
 - c. Industrial Service Supply
 - d. Agricultural Supply.

11. The City of Vallejo approved a Negative Declaration for the Travis Air Force Base Water Treatment Plant Upgrade project in accordance with the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000, et seq.). The project as approved by the City of Vallejo will not have significant adverse effects on water quality.
12. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit written views and recommendations.
13. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, pursuant to the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Prohibitions

1. The collection, treatment or storage of water, wastewater or sludge shall not create a pollution or nuisance as defined in Sections 13050 (l) and (m), respectively, of the California Water Code.
2. The discharge, bypass or overflow of sludge or water from the sludge drying beds to watercourses or waters of the State is prohibited.
3. The discharge of waste, including partially treated drinking water from any part of the water treatment plant, to flowing surface waters is prohibited.
4. The discharge of any materials to the drainage ditch, other than settled, partially treated drinking water from the water treatment plant sedimentation basins, is prohibited.
5. The discharge of settled, partially treated drinking water from the water treatment plant sedimentation basins to the drainage ditch is prohibited during any time when:
 - a. Rainfall is occurring; or
 - b. Rainfall is expected to occur within 48 hours; or
 - c. Soils are saturated such that the rate of percolation into the drainage ditch soils is significantly reduced.
6. The handling, on-site containment and disposal of wastes shall not degrade the quality of any useable ground water.

B. Discharge Specifications

1. To prevent the threat of overflows, the minimum freeboard, to be maintained at all times, shall be two (2) feet in the washwater recovery ponds, and no less than 1.4 feet in the sludge drying beds. Freeboard is the vertical distance between the water surface and the lowest elevation of the top of the impoundment structure (perimeter dike, berm, etc.)
2. The discharge of partially treated water from the sedimentation basins to the drainage ditch shall be controlled in order to:
 - a. Prevent erosion or washout of the drainage ditch;
 - b. Prevent discharge to the drainage ditch of any solids or sludge contained in the sedimentation basins; and
 - c. Contain all discharged water within the drainage ditch, without any discharge to flowing surface waters.
3. The sludge drying beds and washwater recovery ponds shall be managed and maintained to provide complete and adequate containment of their contents, and shall comply with all applicable requirements contained in Title 23, Division 3, Chapter 15 of the California Code of Regulations. (formerly referenced as Title 23, Chapter 3, Subchapter 15).
4. The treatment, processing, or storage of sludge shall not cause waste to be in any position where it is, or can be, carried from the sludge handling or storage site to be deposited in waters of the State.
5. All sludge treatment, processing and storage sites shall be designed and maintained to adequately protect the sites from surface runoff from adjacent areas, to adequately protect boundaries of the sites from erosion, to prevent leaching, to prevent any conditions that would cause drainage from the sludge materials to escape from the sites. Adequate protection is defined as protection from at least a 100 year storm event.
6. Collected screenings, sludges, and other solids removed from liquids shall be disposed of at a legal point of disposal, and in accordance with the provisions of Title 23, Division 3, Chapter 15 of the California Code of Regulations. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been prescribed or waived by a Regional Water Quality Control Board and which is in full compliance therewith.
7. Permanent sludge storage or disposal activities are not authorized by this Order. Prior to commencing any such activity, a Report of Waste Discharge shall be filed and the site shall be brought into compliance with all applicable regulations.

C. Provisions

1. The Discharger shall comply with all aspects of this Order upon adoption, except as provided in Provision C.2. below.
2. The Discharger shall achieve compliance with the Discharge Specifications of this Order in accordance with the following time schedule:

<u>Task</u>	<u>Compliance Date</u>
a. Submit notification of completion, or copy of signed agreement between City of Vallejo and U.S. Air Force for implementation (construction) of the water treatment plant upgrade project.	Within two weeks after execution of the agreement.
b. Submit time schedule for construction and completion of the water treatment plant upgrade project, and for start-up of the upgraded sedimentation basins and new sludge drying beds.	Within six weeks after execution of the project agreement described in Task a., above.
c. Submit written notification to Board of completion of water treatment plant improvements.	No less than 7 days prior to start-up of new or upgraded facilities.
d. Achieve full compliance.	Upon start-up of new or upgraded facilities.
3. The Discharger shall comply with the Self-Monitoring Program for this Order, as adopted by the Board and as may be amended by the Executive Officer.	
4. The Discharger shall maintain in good working order and operate, as efficiently as possible, any facility or control system installed or as modified to achieve compliance with this Order.	
5. The Discharger shall ensure that the water treatment plant and associated facilities are operated by personnel adequately trained in the operations and maintenance of the plant facilities, and appropriately supervised, to ensure consistent compliance with the requirements of this Order.	
6. The Discharger shall develop and maintain an Operations and Maintenance manual for the Water Treatment Plant. The purpose of this manual is to provide plant operators and regulatory personnel with a source of information describing the plant equipment, recommended operating strategies, process control monitoring, and maintenance activities, necessary to maintain the plants in good working condition and to comply with the requirements of this Order.	

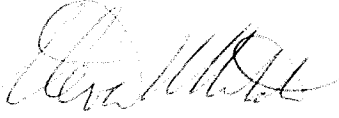
7. The Discharger shall maintain a copy of this Order at the facility site so as to be available at all times to facility operation and maintenance personnel.
8. This Order does not exempt the Discharge from compliance with permitting or regulatory obligations of any other agency, including regulation of storm water discharges and/or storm water drainage systems by local governing agencies.
9. In the event the Discharger is unable to comply with any of the conditions of this Order due to:
 - a. Breakdown of wastewater transport or treatment equipment;
 - b. Accidents caused by human error or negligence; or
 - c. Other causes such as acts of nature,

the Discharger shall notify the Board by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. Written confirmation of this notification shall be submitted within two weeks of the incident. Written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

10. The Discharger shall permit the Board or its authorized representatives, in accordance with Section 13267(c) of the California Water Code:
 - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Access to and copy of, at reasonable times, any records that must be kept under the conditions of this Order;
 - c. Inspection, at reasonable times, of any facility (including monitoring and control equipment), practices, or operations regulated or required under this Order; or
 - d. To photograph, sample or monitor, at reasonable times, for the purpose of assuring compliance with this Order.
11. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharge shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board.
12. The Discharger shall file with the Board a Report of Waste Discharge at least 180 days before making any material change in the character, location, or volume of the discharge, except for emergency conditions in which case the Board shall be notified immediately of the change.

13. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:
- a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of the discharge;
 - d. Endangerment to public health or environment that can only be regulated to acceptable levels by Order modification or termination.
14. The Board will review this Order periodically and may revise the requirements as necessary to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in this Regional Board's Basin Plan; or changes in the discharge characteristics.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on March 20, 1991.

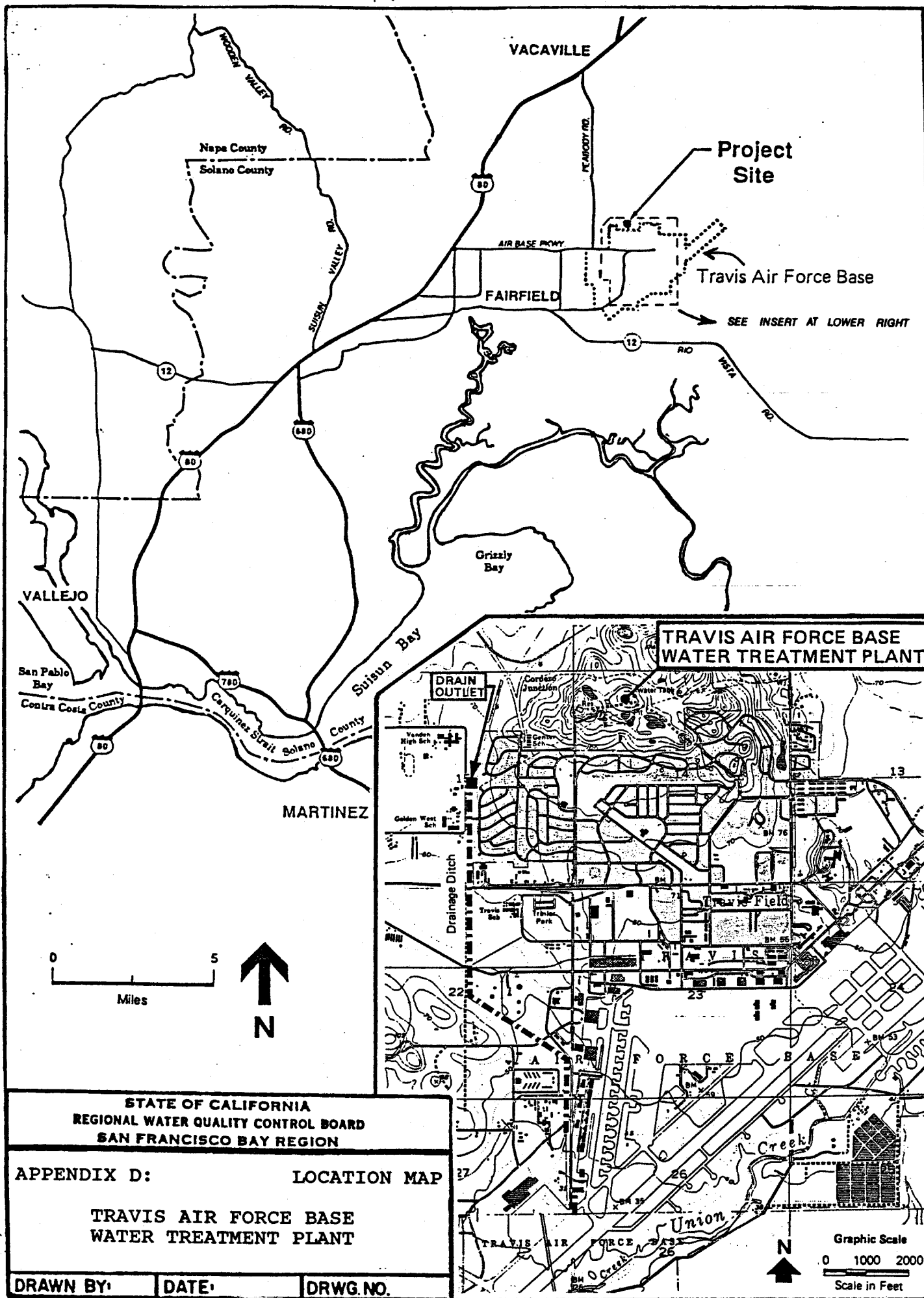


STEVEN R. RITCHIE
Executive Officer

Attachments:

Location Map
Self-Monitoring Program

[File No. 2129.2058]
[Originator/BDA]
[Reviewer/RJC]



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CITY OF VALLEJO, TRAVIS AIR FORCE BASE

WATER TREATMENT PLANT,

TRAVIS AIR FORCE BASE, SOLANO COUNTY

(Waste Discharge Requirements, Order No. 91 - 041)

CONTENTS:

- I. GENERAL
- II. SAMPLING AND ANALYTICAL METHODS
- III. DEFINITION OF TERMS
- IV. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS
- V. SCHEDULE OF SAMPLING, MEASUREMENTS, ANALYSES AND OBSERVATIONS
- VI. REPORTS TO BE FILED WITH THE REGIONAL BOARD

ATTACHMENT A:

- p. 1 of 2: TABLE 1 - SCHEDULE FOR SAMPLING, MEASUREMENTS,
ANALYSES AND OBSERVATIONS
- p. 2 of 2: TABLE 1 FOOTNOTES

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principle purposes of a monitoring program by a waste discharger, also referred to as a self-monitoring program, are:

1. To document compliance with waste discharge requirements established by this Regional Board; and
2. To facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharges.

II. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR S136), the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association and Water Pollution Control Federation, or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS), or a laboratory waived by the Executive Officer from obtaining a DOHS certification for these analyses.

The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

III. DEFINITION OF TERMS

- A. A grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only conditions existant at the time of sampling.
- B. A flow sample is the accurate measurement of the flow volume over a given period of time using a properly calibrated and maintained flow measuring device. Flows calculated from properly maintained pump useage records for an accurately calibrated pump are acceptable.
- C. Freeboard is the vertical distance between the water surface and the top of the water impoundment containment (perimeter dike, berm or outlet structure).

D. Standard Observations

1. Drainage Ditch

[for DD monitoring stations]

- (a) Depth of water in the drainage ditch.
- (b) Evidence of erosion caused by the discharge of water from the water treatment plant. *
- (c) Evidence of seepage or overflow out of the drainage ditch of water discharged from the water treatment plant. *
- (d) Evidence of discharge into flowing surface waters (receiving waters), of water discharged from the water treatment plant. *

* If any erosion, seepage, overflow, discharge or evidence thereof observed, show location of observations and affected area on a sketch or map of the site, and include estimated volume or flow rate).

2. Washwater Recovery Pond and Sludge Drying Beds

[for P and S monitoring stations]

- (a) For each containment, determine freeboard at the lowest elevation of the pond containment structure.
- (b) Evidence of seepage from the containment (Show affected area on sketch, and include estimated volume or flow rate).
- (c) Nuisance odors from containment. If present, indicate apparent source or cause, characterization, direction of travel, and area affected by the odors.

IV. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

NOTE: A map or sketch of the facility site showing the locations of all stations described below shall accompany the first monitoring report following adoption of this Self-Monitoring Program, and subsequent reports when station locations are changed or a violation is reported.

<u>Station</u>	<u>Description</u>
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A. WATER TREATMENT PLANT

SB	Located at a point in the sedimentation basin sufficient for obtaining a water sample representative of the water contained in the basin.
E-1	Located at any point in the sedimentation basin outlet or drainage structure, sufficient for measuring the total flow of water discharged from the basin to the drainage ditch.

B. DRAINAGE DITCH

DD-1	Located at a point in the unlined, open drainage ditch where settled water from the water treatment plant sedimentation basins discharges into the ditch.
DD-2	Located at a point in the Drainage Ditch downstream of station DD-1, upstream of any flowing water, upstream of the ditch's connection with Union Creek, and beyond which water discharged from the water treatment plant does not pass.

C. ON-SITE WASTE IMPOUNDMENTS

P-1 through P-4	<u>Washwater Recovery Pond</u> - points located at the midpoints of the pond perimeter containment structure (levee).
S-1 through S-4	<u>Sludge Drying Beds</u> - Points located at the midpoints of the drying bed perimeter containment structure (levee).

V. SCHEDULE OF SAMPLING, MEASUREMENTS, ANALYSES AND OBSERVATIONS

The Discharger is required to perform sampling, measurements, analyses and observations according to the schedule given in Table 1 and Table 1 Footnotes (Attachment A).

VI. REPORTS TO BE FILED WITH THE REGIONAL BOARD

A. Advance Notification of Each Discharge Event

The Discharger shall notify the Regional Board, in writing, no less than seven days prior to each discharge event, of the planned date(s) of each event of discharge of water from the water treatment plant sedimentation basins to the drainage ditch.

B. Self-Monitoring Reports

Written reports shall be filed regularly for each calendar quarter, and shall be submitted to this Regional Board's office no later than the fifteenth day of the month following the end of the monitoring period.

[ie: Qtr	Monitoring Period	SMR due by
1st	January - March	February 15th
2nd	April - June	July 15th
3rd	July - September	October 15th
4th	October - December	January 15th]

The reports shall consist of the following:

1. Letter of Transmittal

A letter transmitting the self-monitoring reports should accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

2. Results of Analyses and Observations

Tabulations of the results from required analyses and observations specified in Table 1 (Attachment A) by date, time, type of sample, and sample station.

C. Report of Permit Violation

In the event the Discharger violates, or threatens to violate any Prohibition, Specification, Provision or Self-Monitoring Program component of the waste discharge requirements due to:

- a. Maintenance work, power failure, or breakdown of wastewater transport or treatment equipment;

- b. Accidents caused by human error or negligence; or
- c. Other causes such as acts of nature,

the Discharger shall notify the Regional Board office by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. Written confirmation of this notification shall be submitted within two weeks of the date of the incident. The written notification shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 91 - 041.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger and revisions will be ordered by the Executive Officer.



STEVEN R. RITCHIE
Executive Officer

Effective Date April 4, 1991

Attachments:

- A. Table 1 - Schedule for Sampling, Measurements, Analyses and Observations
Table 1 Footnotes

[File No. 2129.2058]
[Originator/ BDA]
[Reviewer/ RJC]

CITY OF VALLEJO, TRAVIS AIR FORCE BASE WATER TREATMENT PLANT,
SELF-MONITORING PROGRAM (for Order No. 91 - 041)

ATTACHMENT A

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TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, ANALYSES, AND OBSERVATIONS

SAMPLING STATIONS -->	Foot note	SB	E-1	DD-1 & DD-2		All P	All S	
Type of Sample -->	(1)	G	Flow	O		O	O	
Parameter (units)								
Board Notification	(2)	E						
Flow Rate (gpm & gpd)	(3)		D					
Flow Volume (gallons)	(3)		E					
BOD, 5-day (mg/l)		E						
Dissolved Oxygen (mg/l)		E						
Dissolved Sulfide(mg/l)	(4)	E						
pH (units)		E						
Total Dissolved Solids (mg/l)		E						
Turbidity (NTU)		E						
Cations (mg/l)	(5)	E						
Surfactants/MBAS (mg/l)		E						
Metals (mg/l)	(6)	E						
All Applicable Standard Observations	(7)			2/D		2W	2W	

LEGEND:

Type of Sample

Flow = Flow measurement

G = Grab Sample

O = Observations

Sampling Frequency

D = Daily

2/D = twice per day

2W = Once every two weeks

E = Once each discharge event (1)

CITY OF VALLEJO, TRAVIS AIR FORCE BASE WATER TREATMENT PLANT,
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TABLE 1 FOOTNOTES

- (1) Samples for analysis of the sedimentation basin water (which is intended to be discharged to the drainage ditch) shall be taken no more than five (5) days prior to the discharge date.
- (2) The Discharger shall notify the Regional Board, in writing, of the planned date(s) of each discharge from the water treatment plant to the drainage ditch, no less than seven days prior to the discharge event.
- (3) Flow Rate: Continuous flow measurement, with recording and reporting, for each calendar day of discharge, the following:
 - a. Peak Flow Rate in gallons per minute (gpm); and
 - b. Average Daily Flow Rate in gallons per day (gpd).

Flow Volume: Measurement, recording and reporting, for each discharge event, the total flow volume discharged from the sedimentation basins to the drainage ditch, in gallons.

- (4) Dissolved Sulfides: Analysis required only when Dissolved Oxygen is less than 2.0 mg/l.
- (5) Cations: Samples shall be analyzed for the following:

Calcium	Carbonate	Nitrite
Magnesium	Bicarbonate	Phosphate
Sodium	Chloride	Flouride
Potassium	Sulfate	Silica
Iron	Nitrate	Boron
Manganese		
- (6) Metals: Samples shall be analyzed for the following:

Aluminum	Copper	Selenium
Arsenic	Lead	Silver
Cadmium	Mercury	Zinc
Chromium	Nickel	
- (7) Observations: Drainage Ditch observations, as described in SMP Section III.D., shall be made:

- a. At Stations DD-1 and DD-2, twice daily, with no less than four hours between each observation time, for each calendar day during which discharge from the water treatment plant to the drainage ditch occurs; and
- b. At Station DD-2 daily on each day after the discharge ceases, until the water level in the drainage ditch has receded to less than six inches depth.